ABSTRACT OF THE DISCLOSURE

A method for inserting a cassette into a nucleic acid molecule to produce a modified nucleic acid molecule, e.g., a nucleic acid-cassette fusion, is described. The method involves the use of polymerase chain reaction, thereby permitting precise targeting of the desired site in the molecule, but does not require ligation. Also described is the use of this method for high throughput screening the resulting modified nucleic acid molecules.